

**IN THE UNITED STATES DISTRICT
COURT FOR THE EASTERN DISTRICT
OF TEXAS MARSHALL DIVISION**

NETLIST, INC.,)	
)	
Plaintiff,)	
)	Case No. 2:22-cv-293-JRG
vs.)	
)	JURY TRIAL DEMANDED
SAMSUNG ELECTRONICS CO, LTD;)	(Lead Case)
SAMSUNG ELECTRONICS AMERICA,)	
INC.; SAMSUNG SEMICONDUCTOR)	
INC.,)	
)	
Defendants.)	

NETLIST, INC.,)	
)	
Plaintiff,)	
)	Case No. 2:22-cv-294-JRG
vs.)	
)	JURY TRIAL DEMANDED
MICRON TECHNOLOGY, INC.;)	
MICRON SEMICONDUCTOR)	
PRODUCTS, INC.; MICRON)	
TECHNOLOGY TEXAS LLC,)	
)	
Defendants.)	

**PLAINTIFF NETLIST, INC.'S OPPOSITION TO SAMSUNG'S MOTION
TO STRIKE EXPERT TESTIMONY OF DR. ANDREAS GROEHN
(DKT. 348)**

TABLE OF CONTENTS

	<u>Page</u>
I. ARGUMENT.....	1
A. Dr. Groehn’s Hedonic Regression Analysis is Reliable	1
B. Samsung’s Arguments Are Misplaced and Go To The Weight of Dr. Groehn’s Analysis.....	3
C. Dr. Groehn’s Regression is Proper to Present to the Jury Irrespective of Mr. Kennedy’s Report.....	8
II. CONCLUSION	10

TABLE OF AUTHORITIES

	Page(s)
 Cases	
<i>Briseno v. ConAgra Foods, Inc.</i> , 844 F.3d 1121 (9th Cir. 2017).....	2
<i>In re ConAgra Foods, Inc.</i> , 90 F. Supp. 3d 919 (C.D. Cal. 2015).....	1
<i>Huawei Techs. Co. v. T-Mobile US, Inc.</i> , 2017 WL 7052466 (E.D. Tex. Sept. 10, 2017)	2
<i>In re Qualcomm Antitrust Litig.</i> , 328 F.R.D. 280 (N.D. Cal. Sept. 27, 2018)	2
<i>Stragent, LLC v. Intel Corp.</i> , No. 6:11-CV-421, 2014 WL 1389304 (E.D. Tex. Mar. 6, 2014)	9, 10
<i>In re Toyota Motor Corp. Hybrid Brake Mktg.</i> , No. 10-MD-02172-CJC, 2012 WL 4904412 (C.D. Cal. Sept. 20, 2012)	2
<i>Uniloc USA, Inc. v. Microsoft Corp.</i> , 632 F.3d 1292 (Fed. Cir. 2011).....	10
<i>United States v. Valencia</i> , 600 F.3d 389 (5th Cir. 2010).....	2
<i>Werdebaugh v. Blue Diamond Growers</i> , No. 12-CV-02724-LHK, 2014 WL 7148923 (N.D. Cal. Dec. 15, 2014)	7
 Non-periodicals Publications	
Yule, G. Udny, An Introduction to the Theory of Statistics, (6th Ed.) 1922, available at http://cda.psych.uiuc.edu/Wallace/yule_1911.pdf	4
 Rules	
Fed. R. Evid. 702(a).....	9

Samsung's motion should be denied. The Court denied Samsung's motion to strike Dr. Groehn's almost identical regression from the prior case.¹ At most, Samsung's substantive attacks on Dr. Groehn's regression go to the weight of his testimony, not its admissibility. And Samsung's argument that Dr. Groehn's testimony would be unhelpful to the trier of fact is incorrect.

I. ARGUMENT

A. Dr. Groehn's Hedonic Regression Analysis is Reliable

Dr. Groehn conducted a hedonic regression analysis designed to [REDACTED]

[REDACTED] Dkt. 348-1 (Groehn Report) at ¶ 9. As he explains, the [REDACTED]

[REDACTED] *Id.*

at ¶ 27. Further, [REDACTED]

[REDACTED] and

[REDACTED] *Id.* at ¶¶ 22-23.

Courts "regularly recognize that hedonic regression is a widely accepted econometric methodology that satisfies the four *Daubert* factors of testability, peer review and publication, measurable error rate, and general acceptance. *See, e.g., In re ConAgra Foods, Inc.*, 90 F. Supp. 3d

¹ *Netlist, Inc. v. Samsung Elecs. Co., Ltd.*, No. 21-cv-463 (E.D. Tex. Apr. 5, 2023) ("*Samsung P*"), Dkt. 432 at 5

919, 947 (C.D. Cal. 2015), *aff'd sub nom. Briseno v. ConAgra Foods, Inc.*, 844 F.3d 1121 (9th Cir. 2017); *In re Toyota Motor Corp. Hybrid Brake Mktg.*, No. 10-MD-02172-CJC, 2012 WL 4904412, at *4 (C.D. Cal. Sept. 20, 2012).” *In re Qualcomm Antitrust Litig.*, 328 F.R.D. 280, 305 (N.D. Cal. Sept. 27, 2018). Indeed, “hedonic regression analysis... is a ‘powerful tool’ for ‘understand[ing] the relationship between a dependent and an explanatory variable,’ and is commonly used.” *VLSI Tech. LLC v. Intel Corp.*, No. 6:21-CV-57 (W.D. Tex.), Dkt. 638 at 4 (quoting *United States v. Valencia*, 600 F.3d 389, 427 (5th Cir. 2010)). Courts in this District have similarly found that “regression analysis adequately approximates the value of the underlying technology, even if the approximation is not perfect.” *Huawei Techs. Co. v. T-Mobile US, Inc.*, 2017 WL 7052466, at *3 (E.D. Tex. Sept. 10, 2017) (Payne, J.).

Here, Dr. Groehn analyzed nearly [REDACTED] and determined that there was a direct relationship between the speed and the price of the accused products. *Id.* at ¶¶ 33-37, 45-52. Specifically, he found that [REDACTED] [REDACTED]” *Id.* at ¶ 54.

As noted above, the Court refused to strike Dr. Groehn’s regression analysis from the *Samsung I* action. *Samsung I*, Dkt. 432 at 5 (“DENIED... The Court found that Samsung’s arguments go to the weight of Dr. Groehn’s testimony, not to admissibility.”) Dr. Groehn explained in deposition that [REDACTED] [REDACTED] Ex. 4 (Groehn Depo.) 20:25-21:4. Indeed, both regressions [REDACTED] [REDACTED]. Samsung has not identified any differences between Dr. Groehn’s regressions in the two cases that would merit a different decision in this case.

B. Samsung's Arguments Are Misplaced and Go To The Weight of Dr. Groehn's Analysis

Samsung first argues that Dr. Groehn should not have aggregated Samsung's [REDACTED]

[REDACTED] Mot. at 2. Samsung does not explain what the impact of this choice is on Dr. Groehn's analysis or why it would render it unreliable. Nevertheless, the choice of whether to [REDACTED] is one of professional judgement and requires the expert to weigh the pros and cons of including [REDACTED]. In particular, the expert must consider whether or not the additional variables cause multicollinearity and overfitting in the model such that the estimated coefficients are not reliable. For example, Samsung's damages expert Ms. Kindler claims that she [REDACTED]

[REDACTED] Ex. 2 (Kindler Report) ¶ 318. This information is irrelevant to Dr. Groehn's analysis, which is an [REDACTED]

[REDACTED], as Dr. Groehn did here.

Notably, Samsung ignores the fact that Dr. Groehn explains in his report that he did in fact run regressions [REDACTED] and determined that the [REDACTED] was the proper fit for this case. Dkt. 348-1 at ¶¶ 47-48. Dr. Groehn explained at deposition that he provided Samsung with the results of those regressions, and also explained that he could discuss those results at deposition. Samsung chose not to ask him about those regressions at his deposition:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Ex. 4 (Groehn Depo) 138:22-139:3. Samsung's claim that running a regression on [REDACTED] is proper could have been fertile hunting grounds for cross-examination, but instead Samsung decided not to ask Dr. Groehn any questions about his own analysis of the issue.

Samsung's disagreement with Dr. Groehn's opinion that the [REDACTED] goes to the weight of his analysis. Indeed, by seeking to exclude Dr. Groehn's analysis as unreliable, Samsung seeks to substitute statistical judgment for a legal one that would require *every* regression to include customer-specific information regardless of whether there are valid reasons to exclude such information from the model.

Samsung next argues that Dr. Groehn should not have used [REDACTED] because [REDACTED] Mot. at 3. Samsung then argues that [REDACTED] and that this somehow renders Dr. Groehn's analysis unreliable. Samsung mistakenly uses the maximum and minimum in a given month as evidence of price dispersion. It is well known, however that such a measure is flawed:

The simplest possible measure of the dispersion of a series of values of a variable is the actual range, i.e., *the difference between the greatest and least values observed*. While this is frequently quoted, it *is as a rule the worst of all possible measures for any serious purpose*. There are seldom real upper and lower limits to the possible values of the variable, very large or very small values being only more or less infrequent: *the range is therefore subject to meaningless fluctuations* of considerable magnitude according to values of greater or less infrequency happen to have been actually observed.²

Samsung also, without any support whatsoever, claims that Dr. Groehn's "[u]se of the [REDACTED] makes the input overly sensitive to the mix of customers that

² Yule, G. Udny, An Introduction to the Theory of Statistics, (6th Ed.) 1922, p. 133, available at http://cda.psych.uiuc.edu/Wallace/yule_1911.pdf.

██████████, skewing the data.” Mot. at 3. The opposite is true. The aggregation of data makes the analysis less sensitive to noise that appears in the data.

Samsung next argues that Dr. Groehn should have verified his regression with Samsung customers. This is baseless for several reasons. Dr. Groehn’s analysis is an empirical measurement of data. This analysis does not require discussion with customers, nor would discussion with customers be helpful in any way. Indeed, views of a particular customer would skew the data to lean in favor of that particular customer’s experiences. Samsung next argues that Dr. Groehn should have asked Netlist employees to evaluate the results of his analysis. Mot. at 3. This makes no sense for multiple reasons, including the fact that Dr. Groehn’s analysis is subject to the Protective Order in this case, and Dr. Groehn thus could not discuss the data or findings of his analysis with anyone at Netlist.³

Samsung next argues that “Dr. Groehn also assumes that ██████████

██████████ Mot. at 3, which somehow renders his regression unreliable. To be clear, Dr. Groehn and Samsung’s damages experts Ms. Kindler and Dr. Perryman all agree that time is a relevant factor to include in the regression. Dr. Groehn did so ██████████ whereas Ms. Kindler and Dr. Perryman ██████████
See, e.g., Ex. 2 (Kindler Report) ¶ 324 ██████████

██████████ Ex. 3
(Perryman Report) ¶ 66 ██████████

³ One can imagine that if Dr. Groehn had spoken to Netlist or any other customers regarding his analysis and then revised his analysis based on that discussion (as Samsung proposes), Samsung would move to strike that analysis as non-replicable and thus unreliable, as well as not based on facts in evidence. This is another reason why Samsung’s argument holds no water.

[REDACTED] A disagreement among experts over how to address time in a regression goes to the weight of the analysis. Ex. 4 (Groehn Depo) at 161:2-22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (interjections omitted).

To be clear, Dr. Groehn's approach to time is the correct approach from a statistical point of view. By including a linear time trend variable in the regression, Dr. Groehn is testing whether the relationship between price and time (if any) can be accounted for by a linear trend. This is different than assuming the price-time relationship is actually linear, as Samsung suggests. That

[REDACTED]

[REDACTED]

[REDACTED]

Dkt. 348-1 ¶ 50, Table 4.⁴

Samsung relies on *Werdebaugh v. Blue Diamond Growers* in support of its motion, but that reliance is misplaced. Mot. at 4. In *Werdebaugh*, the Court concluded that Dr. Capps' hedonic regression model was "insufficient under *Comcast* because Dr. Capps' model is **incapable** of isolating the damages attributable to Defendant's alleged wrongdoing." *Werdebaugh v. Blue Diamond Growers*, No. 12-CV-02724-LHK, 2014 WL 7148923, *11 (N.D. Cal. Dec. 15, 2014). Here, however, Samsung cannot and does not claim Dr. Groehn's analysis is **incapable** of isolating the effect that speed has on the price of the accused products. Rather, Samsung (erroneously) asserts that Dr. Groehn's analysis **imprecisely** measures the effect. *See, e.g.* Mot. 1 (vaguely asserting that "[t]hese facts, if taken into consideration, would significantly impact the results of his study."). This distinction is evidenced by the fact that Samsung offers its own experts – Dr. Perryman and Ms. Kindler – who purport to remedy the imprecision through adjustments to Dr. Groehn's model. *See, e.g.*, Ex. 2 (Kindler) at ¶¶ 323-326; Ex. 3 (Perryman) at ¶¶ 96-98. However, Samsung's experts' attempts at remediation would not make sense if Dr. Groehn's model were **incapable** of estimating the relationship between speed and price, as was the issue in *Wederbaugh*. After all, if Dr. Groehn's model were incapable of estimating the relationship between speed and price, so must be Dr. Perryman's and Ms. Kindler's proposed adjusted versions of the model.⁵

⁴ As noted, Samsung's experts [REDACTED]. However, the inclusion of so many additional variables to the regression can and does have consequences for the validity of the model and the benefit (if any) of such an approach must be weighed against the costs. Whether Dr. Groehn, Dr. Perryman, or Ms. Kindler most effectively weighed those costs and benefits is for a jury to determine.

⁵ To be clear, the alternatives proposed by Dr. Perryman and Ms. Kindler have severe deficiencies that render them unreliable. As one example, Dr. Perryman [REDACTED]
[REDACTED] However, those variables introduce severe multicollinearity and undermine the ability of Dr. Perryman's model to accurately estimate the relationship between speed and time.

Samsung's criticisms thus go to the weight of Dr. Groehn's opinions rather than a flaw in his methodology.

Samsung's reliance on *Wells*, wherein the expert opinion was unreliable in part because it was not backed by studies meeting requisite scientific standards, is likewise misplaced. Mot. at 4 (citing *Wells v. SmithKline Beecham Corp.*, 601 F.3d 375, 378 (5th Cir. 2010)). In this case, Samsung offers no evidence that Dr. Groehn's methodology, called hedonic regression analysis and used in academic research since 1939, does not meet requisite scientific standards. Indeed, both of Samsung's experts rely on hedonic regressions as well.

C. Dr. Groehn's Regression is Proper to Present to the Jury Irrespective of Mr. Kennedy's Report

Samsung argues that Dr. Groehn cannot present his analysis to the jury if Mr. Kennedy's damages analysis is stricken. Samsung argues this is because Dr. Groehn did not himself "find a relationship between specific patents and speed or price" and he himself "offers no opinion that the patents offer any particular speed benefit." Mot. at 5-6. This is a red herring. It is indeed true that Dr. Groehn did not offer opinions on technical speed benefits of the patents. Netlist's technical expert, Dr. Mangione-Smith, provides those opinions.

For example, as to the '912 Patent, Dr. Mangione-Smith explains that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]" [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] and [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 1 (Mangione-Smith Report Ex. I) ¶¶ 23-30.

As to the '417 Patent, Dr. Mangione-Smith explains that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Id.*, ¶ 48.

As to the '608 Patent, Dr. Mangione-Smith opines that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] and [REDACTED]

[REDACTED]

[REDACTED] *Id.*, ¶¶ 58-59.

The jury will thus hear that the asserted claims provide substantial speed benefits to the Accused Products from Dr. Mangione-Smith. This directly contradicts Samsung's argument that the jury will not hear about "how the asserted patents contribute to the incremental difference in speed." Mot. at 6. There is also no concern of prejudice as Samsung contends, as Dr. Mangione-Smith will tell the jury exactly how the patents-in-suit impact speed. *Id.* Dr. Groehn's analysis, which measures the impact of speed increases and decreases on the price of the Accused Products, will thus "will help the trier of fact to understand the evidence" regarding the impact of the patented technology on the Accused Products. Fed. R. Evid. 702(a).

Samsung's reliance on *Stragent* is misplaced. *Stragent, LLC v. Intel Corp.*, No. 6:11-CV-421, 2014 WL 1389304 (E.D. Tex. Mar. 6, 2014); order clarified, No. 6:11-CV-421, 2014 WL 12611339

(E.D. Tex. Mar. 12, 2014). There, the damages expert opined that 19 features accounted for 42% of the value of the product, and that the accused feature constituted 1 of those 19 features. 2014 WL 12611339 at *4. The damages expert was not relying on a technical opinion to support his own opinion, nor was there any evidentiary support for the notion that each of the 19 features contributed equally to the accused product. *Id.* Rather, the expert assigned the features equal value simply because “he could not separately estimate the value of the accused feature because all 19 RAS features were present in the same processor models,” which the Court found effectively amounted to a “guess as to the value of the accused feature.” *Id.* Thus, the expert’s opinion was not tied to the facts of the case and was not helpful to the trier of fact, as it was “arbitrary, general, and ‘unrelated to the facts of the case.’” *Id.* (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011)). Here, on the other hand, Dr. Mangione-Smith will provide the technical explanation of how the patented features themselves impact the accused products to lower their speed. Accordingly, Dr. Groehn’s analysis will thereafter help the jury understand how a change in speed impacts the price of the accused products. *Stragent* is thus irrelevant to the case at hand, where Netlist’s expert is not merely “[u]tilizing guesswork.” *Id.*

Moreover, as explained in detail in Netlist’s opposition to Samsung’s motion to exclude Mr. Kennedy’s opinions, Mr. Kennedy’s analysis complies with Federal Circuit precedent on apportionment, and the proper mechanism for Samsung to address the issues it raises is by cross-examining Mr. Kennedy, Dr. Mangione-Smith and Dr. Groehn.

II. CONCLUSION

The Court should deny Samsung’s motion.

Dated: January 30, 2024

Respectfully submitted,

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CERTIFICATE OF AUTHORIZATION TO FILE UNDER SEAL

I hereby certify that the foregoing document and exhibits attached hereto are authorized to be filed under seal pursuant to the Protective Order entered in this Case.

/s/ Isabella Chestney
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CERTIFICATE OF SERVICE

I hereby certify that, on January 30, 2024, a copy of the foregoing was served to all counsel of record via Email as agreed by the parties.

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